Motion and Sound

3-5 The student will demonstrate an understanding of how motion and sound are affected by a push and pull on an object and the vibration of an object (Physical Science)

3-5.7 Recognize ways to change the volume of sounds.
Taxonomy level: 1.1-A Remember Factual Knowledge

Previous/Future knowledge: Students have not been introduced to the concept of sounds in previous grades. In the 8th grade (8-6.3), students will study this concept in more depth as they study the factors that influence the basic properties of waves for example volume or amplitude.

It is essential for students to know that the volume of sounds can be changed.

Strength of the vibrations
- If the vibrations are made stronger or weaker by striking or plucking objects harder or softer, the volume will get louder or softer.
- If the force is decreased, the volume becomes softer.
- If the force is increased, the volume becomes louder.
- Tapping a desk lightly produces a soft sound while hitting a desk hard produces a loud sound.

Distance
- If the sources of the vibrations are *farther away*, the volume of the sound is softer.
- The closer the source of the vibrations, the louder the volume of the sound will be.

Radios, TVs, and disc players have loudness, or volume, controls. The volume can be turned up to make the sound louder or turned down to make the sound softer.

It is not essential for students to know that volume is related to the amplitude of sound waves.

Assessment Guidelines:
The objective of this indicator is to *recognize* ways to change the volume of sounds; therefore, the primary focus of assessment should be to recall ways that the volume of sounds could be changed. However, appropriate assessments should also require students to *recall* how to make an object produce a louder sound; or *identify* loud sounds or soft sounds from a list or illustration.